

## ABSTRACT

An HDL conversion process receives a data structure representing the behavior of a circuit element. The circuit element is sequential and the data structure is define in a hardware description language (HDL) using a specific format. The conversion  
5 process generates a conversion matrix from the data structure. The conversion matrix represents the behavior of the circuit element in a generic format. The conversion process then determines a generic HDL register and a plurality of generic HDL input logic for the generic HDL register to replicate the behavior represented by the data structure based on the conversion matrix.